2009 Highway Customer Survey

Overall Highlights Report

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1. Introduction

TMC The Marketing Clinic was retained by the Nova Scotia Department of Transportation and Infrastructure Renewal to complete the 2009 Highway Customer Survey. The survey has been conducted since 1997, and is dedicated to identifying areas for improvement of Nova Scotia's highways, measuring client satisfaction with highways and related services, as well as determining citizens' views about the importance and quality of various services.

A random sample of 2,076 respondents was drawn using a stratified design based upon the population of four districts across the province. The sample was designed to allow for proportionate representation within each district for men and women 16 years and over, based upon Canadian Census data. The final sample had a margin of error of plus/minus 2.15%, 19 out of 20 times. The margin of error at the district level was plus/minus 4.3%, 19 out of 20 times. The sampling result by district, gender, and age is provided in Table 1. Calls were made using Computer Assisted Telephone Interviewing (CATI). The survey was completed November through December, 2009.

The districts were grouped in the following manner:

- Central: Halifax and Hants counties
- Eastern: Antigonish, Guysborough, Inverness, Victoria, Cape Breton and Richmond counties
- Northern: Pictou, Cumberland and Colchester counties
- Western: Kings, Annapolis, Digby, Yarmouth, Shelburne, Lunenburg and Queens counties

Table 1: Sample by district, age, and gender*

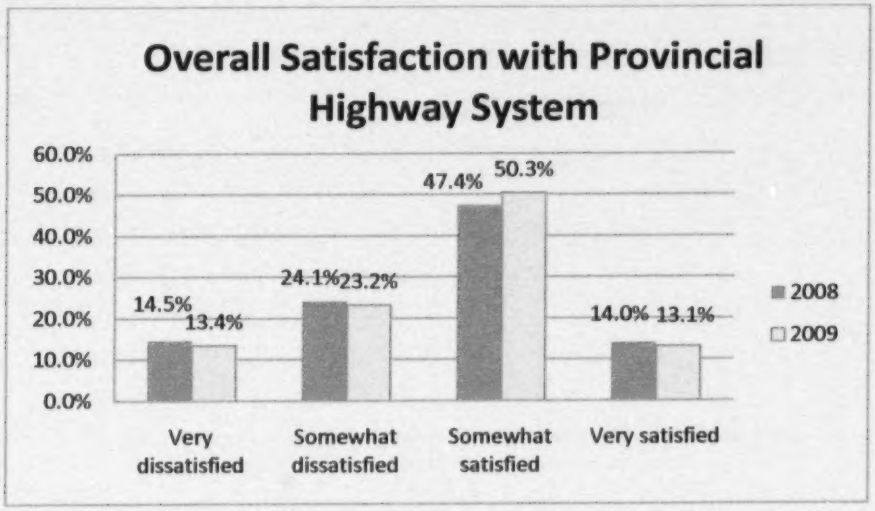
		Gender		
	Age	Male	Female	Total
Central District	16 to 30	80	51	131
	31 to 45	57	93	150
	46 to 60	57	80	137
	61 and Over	53	47	100
	Refused	0	1	1
	Total	247	272	519
Eastern District	16 to 30	88	31	119
	31 to 45	39	79	118
	46 to 60	56	90	146
	61 and Over	61	75	136
	Total	244	275	519
Northern District	16 to 30	62	43	105
	31 to 45	54	73	127
	46 to 60	58	86	144
	61 and Over	73	70	143
	Total	247	272	519
Western District	16 to 30	30	45	75
	31 to 45	63	67	130
	46 to 60	76	83	159
	61 and Over	80	75	155
	Total	249	270	519
Overall	16 to 30	260	170	430
	31 to 45	213	312	525
	46 to 60	247	339	586
	61 and Over	267	267	534
	Refused	0	1	1
	Total	987	1089	2,076

*Unweighted sample distribution.

2. Overall Satisfaction

Figure 1 illustrates the overall level of satisfaction with the provincial highway system in 2008 and 2009. The results reveal that 36.5% of respondents were very dissatisfied, or somewhat dissatisfied, with the highway system in 2009 compared to 38.6% in 2008.

Figure 1: Overall satisfaction with the provincial highway system



The average rating in 2009 was 2.63 out of a possible scale rating of 4, compared to a rating of 2.61 in the 2008 survey. The difference between the two averages was not statistically significant, meaning that overall satisfaction with the provincial highway system has remained consistent over the past year.

The breakdown for overall satisfaction with the provincial highway system by district appears in Table 2. Results revealed that those in the Central district were the most satisfied, with 70.0% rating their satisfaction with the provincial highway system as somewhat satisfied or very satisfied. The Northern district was second, with 60.7% indicating their overall satisfaction with the highways, followed by Western (59.5%) and the Eastern district (54.5%).

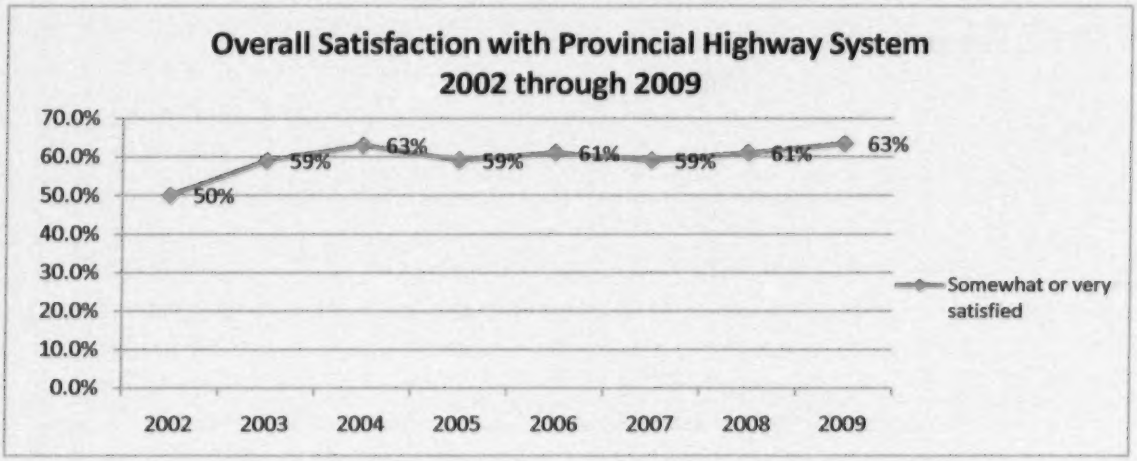
Table 2: 2009 Overall Satisfaction

Response*	2009 Overall %	Central %	Eastern %	Northern %	Western %
Very Dissatisfied	13.4	10.2	20.6	12.9	14.1
Somewhat Dissatisfied	23.1	19.8	24.9	26.4	26.4
Somewhat Satisfied	50.3	56.1	41.0	47.6	48.1
Very Satisfied	13.1	13.9	13.5	13.1	11.4

*Scale: 1) Very dissatisfied, 2) Somewhat dissatisfied, 3) Somewhat satisfied, 4) Very satisfied.

Figure 2 shows the overall level of satisfaction (somewhat satisfied and very satisfied) for all respondents over the past eight years. Results reveal that satisfaction levels have increased overall since 2002. Overall satisfaction in the most recent study was 63%, slightly higher than previous years. The lowest ratings were for 2002 with 50%, and for 2003, 2005 and 2007, with 59% each. There was no statistically significant difference in the overall ratings for 2008 and 2009.

Figure 2: Overall satisfaction with provincial highway system (2002 – 2009)



A variety of reasons were provided by respondents for their lack of satisfaction with the provincial highway system. The results are summarized in Table 3. The top three reasons for dissatisfaction in the 2009 survey included:

- Roads poorly paved or maintained (27.4%)
- Potholes on the roads (26.9%)
- Poor repair or condition of roads (18.7%)

These results were consistent with those in the 2008 survey and were common across all districts. Compared to the 2008 survey, 2009 percentages were statistically significantly lower for roads poorly paved/maintained, poor snow removal, poor road repair/condition, not enough divided highways, tax/gas taxes not properly spent, poor repair and condition of roads, and poor lighting.

Table 3: Reasons for dissatisfaction with provincial highway system

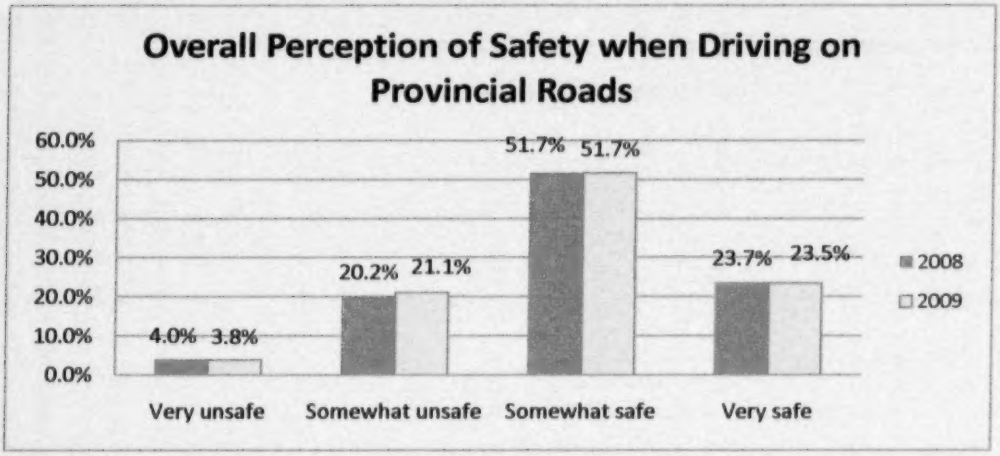
	2008 Overall*	2009 Overall*	Central	Eastern	Northern	Western
Roads poorly paved/maintained	**29.8%**	**27.4%**	19.5%	36.2%	35.1%	31.2%
Potholes	27.1%	26.9%	19.3%	36.0%	33.9%	30.3%
Snow removal is poor	**5.0%**	**1.2%**	0.4%	1.7%	1.3%	2.1%
Poor repair/condition	**23.6%**	**18.7%**	9.2%	21.6%	30.3%	28.1%
Shouldn't allow toll highways	0.1%	0.1%	0.0%	0.2%	0.0%	0.2%
Not enough divided highways	**2.9%**	**1.3%**	0.8%	1.2%	0.8%	2.7%
Too few passing lanes	0.5%	0.4%	0.2%	0.2%	0.0%	1.2%
Debris/garbage on the roads	0.2%	0.1%	0.0%	0.0%	0.0%	0.6%
Tax/gas tax not properly spent	**1.3%**	**0.1%**	0.0%	0.0%	0.2%	0.4%
Signs are poor	0.7%	0.6%	0.8%	0.4%	0.8%	0.2%
Poor lighting	**0.4%**	**0.1%**	0.0%	0.2%	0.4%	0.2%
Other	**19.0%**	**11.8%**	10.8%	13.9%	10.4%	0.9%

*Bolded percentages are statistically significantly different.

3. Driving Safety

Figure 3 reflects perceived safety when driving in Nova Scotia.

Figure 3: Overall perception of safety when driving



Most respondents felt somewhat safe on Nova Scotia's roads. The rating averaged 2.95 out of 4 points which is identical to the rating in the 2008 study. Seventy-five percent felt either very safe or somewhat safe. These results are identical to the 2008 survey results where 75% of respondents felt very or somewhat safe. This shows that there was no change in drivers' overall perceptions of driving safety.

Breakouts of safety perception by district are shown in Table 4 for years 2004 through 2009. Results shown are for respondents who rated their safety as somewhat safe or very safe.

Table 4: Percentage who feel safe when driving in Nova Scotia

	2004	2005	2006	2007	2008	2009
Central	81%	78%	74%	76%	80%	79%
Eastern	74%	70%	75%	75%	73%	75%
Northern	81%	75%	77%	79%	78%	75%
Western	79%	71%	72%	70%	66%	67%

The average scale ratings by district for both 2008 and 2009 surveys were not statistically significantly different. In addition, there were no significant differences between the two studies with regards to district averages. The averages are shown in Table 5.

Table 5: Average scale ratings for perceived driving safety (2006 - 2009)

	2006*	2007*	2008*	2009*
Central	2.89	2.90	3.04	3.02
Eastern	2.91	2.89	2.94	2.96
Northern	2.90	2.99	2.96	2.96
Western	2.82	2.77	2.74	2.79
Overall	2.88	2.89	2.95	2.95

*Scale: 1) Very unsafe, 2) Somewhat unsafe, 3) Somewhat safe, 4) Very safe

Respondents provided different reasons for feeling unsafe when driving on provincial highways. The top five reasons are shown in Table 6.

Results reveal that most concerns were linked to perceived poor maintenance of the roads (poor roads, potholes and poor maintenance). Bad driving habits, limited numbers of twinned highways, and speeding also made drivers feel unsafe.

Results were consistent across districts with few minor differences. The most frequently listed reason for feeling unsafe on Nova Scotia roads were potholes, ruts, bumps and cracks in the road for respondents in all districts. The second-most listed reason was poor road conditions, patchwork and maintenance. For Central and Eastern districts the need for twinned highways was listed third-most often by respondents, while those in the Northern and Western districts listed bad driving habits as their third-most critical reason for feeling unsafe on the roads.

Table 6: Reasons for not feeling safe on Nova Scotia highways

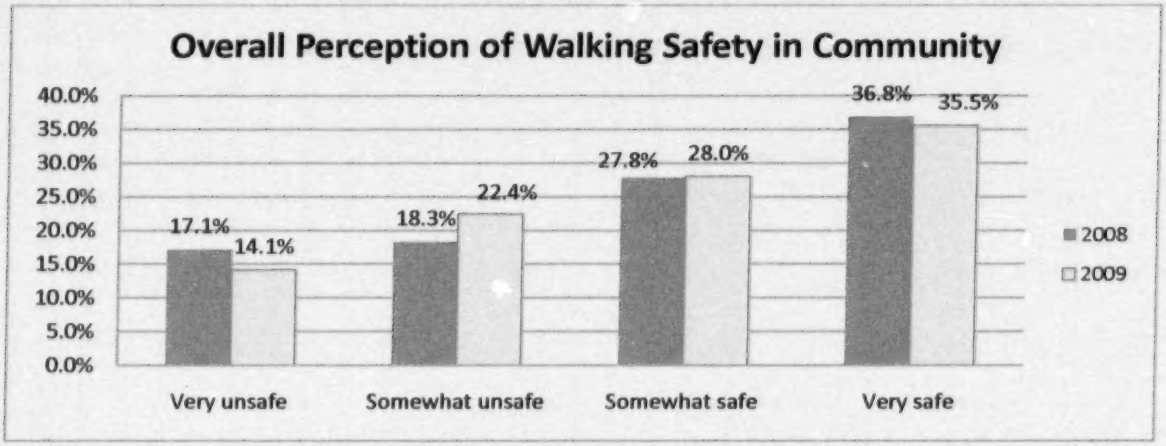
Reasons Given for Feeling Unsafe Driving on NS Roads*	Overall	Central	Eastern	Northern	Western
Poor road conditions/patchwork/maintenance	51.5%	45.4%	58.9%	70.0%	46.2%
Potholes/ruts/bumps/cracks	60.2%	50.0%	68.4%	80.0%	58.5%
Speeding	9.8%	10.2%	8.4%	6.2%	12.3%
Bad driving habits	13.9%	14.8%	8.4%	9.2%	18.7%
Need twinned highways	14.1%	17.6%	10.5%	6.2%	15.8%
Other	29.8%	31.1%	25.3%	21.9%	33.1%

*Note: Percentages are based on the number of respondents who felt somewhat or very unsafe driving on Nova Scotia roads and highways. Sample sizes: Overall = 514 (24.9%), Central = 196 (20.8%), Eastern = 95 (24.4%), Northern = 73 (25.0%), Western = 151 (32.9%).

4. Walking Safety

Figure 4 reflects perceived safety when walking in Nova Scotia.

Figure 4: How safe do you feel as a pedestrian walking in your community?



Most respondents felt safe as pedestrians on Nova Scotia's roads. The safety rating averaged 2.85 out of 4 points, which was not significantly different than the rating for 2008 of 2.84. The results revealed that 63.5% of respondents felt that they were somewhat safe, or very safe, while walking in their communities. This percentage was not statistically significantly different than in the 2008 survey.

Breakouts of safety by district are shown in Table 7 for years 2008 and 2009. Results shown are for respondents who rated their safety as somewhat safe or very safe.

Table 7: Percentage who feel safe when walking in their community

	2008	2009
Central	65%	62%
Eastern	64%	66%
Northern	67%	70%
Western	64%	62%

Average ratings by district are shown in Table 8 for 2008 and 2009. There were no statistically significant differences between the ratings in 2008 and 2009.

Table 8: Average scale ratings for perceived pedestrian safety (2008 - 2009)

	2008*	2009*
Central	2.84	2.79
Eastern	2.89	2.91
Northern	2.87	3.00
Western	2.80	2.83
Overall	2.84	2.85

*Scale: 1) Very unsafe, 2) Somewhat unsafe, 3) Somewhat safe, 4) Very safe

Respondents provided various reasons for not feeling safe when walking in their communities. The top reasons are shown in Table 9.

Results revealed that most concerns were linked to a lack of sidewalks, poor road shoulders, and poor driving habits. Pedestrians feel that drivers seem to be oblivious to them, even when they are on a marked crosswalk. They stated that drivers don't stop or look at crosswalks or pedestrians.

Results were consistent across districts with few minor differences. The greatest concerns in the Eastern, Northern and Western districts were not enough sidewalks. This was also the greatest concern overall. In the Central district, the greatest concern was that drivers did not stop or look at crosswalks or pedestrians. Not enough sidewalks were the second-most critical issue to respondents in the Central district. Drivers not stopping at crosswalks ranked as the second-most critical reason for feeling unsafe overall. The second-most reason for feeling unsafe in the Eastern, Northern and Western reasons were narrow or no shoulders.

Table 9: Reasons for not feeling safe walking in community

Reasons for Not Feeling Safe Walking in Community	Overall	Central	Eastern	Northern	Western
No/not enough sidewalks	45.2%	36.6%	43.4%	50.6%	61.1%
Drivers don't stop/look at crosswalks/ pedestrians	34.2%	41.8%	33.1%	24.0%	24.7%
Narrow/no shoulders	29.2%	16.5%	36.6%	39.6%	43.9%
Speeding drivers	29.9%	25.8%	28.0%	31.2%	38.9%
Other	28.3%	32.5%	29.7%	29.1%	23.0%

*Note: Percentages are based on the number of respondents who felt somewhat or very unsafe walking in Nova Scotia communities. Sample sizes: Overall = 743 (35.8%), Central = 351 (37.4%), Eastern = 131 (33.7%), Northern = 86 (29.7%), Western = 174 (38.2%).

5. Highway Services

5.1 Highway Service Importance Measures

Respondents were asked to indicate how important various highway services were to them. The average ratings are summarized in Table 10, which also provides a comparison to the results of the 2008 survey. There were statistically significant decreases in average service ratings from 2008 to 2009.

Table 11 shows the percentage of respondents who considered each service somewhat or very important for both 2008 and 2009 surveys. The results reveal that the most important services, those services where at least 90% of respondents rated t' e service measure as very or somewhat important, included:

- Filling cracks and potholes (97.7%)
- Bridges (96.9%)
- Snow and ice removal during a storm (95.9%)
- Timeliness of the clean up after a storm (95.8%)
- All pavement markings including yellow and white lines (94.8%)
- The helpfulness of non-commercial highway signs (94.1%)
- Resurfacing sections of the highway (93.7%)

All of the vices were rated important by respondents, with the percent rating each service as somewhat or very important ranging from 75% to 98%. Changes in percentages from 2008 to 2009 were generally not statistically significant. Significantly fewer respondents in 2009 rated the width and surface condition of highway shoulders , grading and dust control of gravel roads, , and ditches and culverts, as important compared to 2008. The biggest changes were for grading and dust control of gravel roads, and for ditches and culverts, where 78% of respondents rated each service as somewhat or very important, down from 81% in 2008, a difference of 3 percentage points.

A comparison of importance measures by district demonstrates that all services were generally important in all districts. All of the services had ratings greater than 2.7, and the Central district was the only district with ratings below 3.0. These services included:

- Grading and dust control of gravel roads (2.91)
- Ditches and culverts (2.93)
- Roadside brush and tree clearing (2.95)

The results for 2009 are summarized in Table 12.

Table 10: A comparison of average ratings for importance of highway services (2008 – 2009)

	2008*	2009*	Change
The amount of four-lane divided highways	3.52	3.48	-0.04
Filling cracks and potholes	3.86	3.85	-0.01
Resurfacing sections of the highway	**3.65**	**3.57**	-0.08
Snow and ice removal during a storm	3.76	3.76	0.00
Timeliness of the clean up after a storm	**3.74**	**3.66**	-0.08
Number of passing lanes (importance of services)	**3.25**	**3.18**	-0.07
The length of passing lanes	**3.31**	**3.24**	-0.07
All pavement markings including yellow and white lines	3.73	3.71	-0.02
Roadside brush and tree clearing	**3.23**	**3.15**	-0.08
The helpfulness of non-commercial highway signs	**3.68**	**3.61**	-0.07
The amount of non-commercial highway signs	**3.50**	**3.43**	-0.07
The maintenance of non-commercial highway signs	**3.53**	**3.47**	-0.06
The width of highway shoulders	**3.57**	**3.48**	-0.09
The surface condition of highway shoulders	**3.58**	**3.51**	-0.07
Grading and dust control of gravel roads	**3.30**	**3.15**	-0.15
Ditches and culverts	**3.27**	**3.17**	-0.10
Bridges	**3.78**	**3.76**	-0.02

*Scale: 1) Very unimportant, 2) Somewhat unimportant, 3) Somewhat important, 4) Very important. Scale value 5 (don't know/not applicable) was not included in the analysis. **Bolded ratings are statistically significantly different between 2008 and 2009.**

Table 11: Percent of respondents rating various highway services as somewhat or very important

	Somewhat or Very Important 2008 (%)*	Somewhat or Very Important 2009 (%)*	Change (percentage points)
The amount of four-lane divided highways	86%	86%	0%
Filling cracks and potholes	98%	98%	0%
Resurfacing sections of the highway	95%	94%	-1%
Snow and ice removal during a storm	96%	96%	0%
Timeliness of the clean up after a storm	96%	96%	0%
Number of passing lanes	81%	80%	-1%
The length of passing lanes	81%	82%	1%
All pavement markings including yellow and white lines	94%	95%	1%
Roadside brush and tree clearing	76%	75%	-1%
The helpfulness of non-commercial highway signs	95%	94%	-1%
The amount of non-commercial highway signs	89%	90%	1%
The maintenance of non-commercial highway signs	89%	89%	0%
The width of highway shoulders	**91%**	**89%**	-2%
The surface condition of highway shoulders	**91%**	**89%**	-2%
Grading and dust control of gravel roads	**81%**	**78%**	-3%
Ditches and culverts	**81%**	**78%**	-3%
Bridges	96%	97%	1%

* Bolded ratings are statistically significantly different between 2008 and 2009.

Table 12: Average ratings of highway service importance measures by district

	Central	Eastern	Northern	Western
The amount of four-lane divided highways	3.53	3.53	3.50	3.35
Filling cracks and potholes	3.82	3.88	3.84	3.89
Resurfacing sections of the highway	**3.46**	**3.70**	**3.65**	3.64
Snow and ice removal during a storm	3.72	3.81	3.80	3.76
Timeliness of the clean up after a storm	**3.61**	3.74	**3.68**	**3.69**
Number of passing lanes	3.09	3.29	**3.09**	3.31
The length of passing lanes	3.17	**3.33**	3.23	3.33
All pavement markings including yellow and white lines	3.65	3.80	3.76	3.75
Roadside brush and tree clearing	**2.95**	**3.34**	3.27	3.33
The helpfulness of non-commercial highway signs	**3.57**	3.67	**3.62**	3.64
The amount of non-commercial highway signs	**3.40**	3.52	**3.44**	**3.43**
The maintenance of non-commercial highway signs	3.42	3.55	**3.50**	**3.49**
The width of highway shoulders	**3.36**	3.62	3.52	3.60
The surface condition of highway shoulders	**3.35**	3.67	3.61	3.64
Grading and dust control of gravel roads	**2.91**	**3.33**	3.30	**3.32**
Ditches and culverts	**2.93**	3.37	3.35	3.40
Bridges	**3.71**	**3.77**	3.80	3.81

*Scale: 1) Very unimportant, 2) Somewhat unimportant, 3) Somewhat important, 4) Very important. Scale value 5 (don't know/not applicable) was not included in the analysis. Bolded averages are statistically significantly lower than 2008 ratings.

5.2 Highway Service Quality Measures

Respondents were asked to rate the quality of the highway services. The results are summarized in Tables 13 and 14, which also provide comparisons to 2008 survey results. The results revealed that the services with 70% or more respondents rating them as good or excellent included:

- The helpfulness of non-commercial highway signs (79.1%)[1]
- The maintenance of non-commercial highway signs (78.5%)
- The amount of non-commercial highway signs (72.1%)

Services that received good or excellent quality ratings by fewer than 60% of respondents included:

- Ditches and culverts (58.8%)
- The length of passing lanes (56.1%)
- The number of passing lanes (55.8%)
- The width of highway shoulders (51.6%)
- The surface condition of highway shoulders (49.3%)
- Resurfacing sections of the highway (49.0%)
- The amount of four-lane divided highways (48.7%)
- Grading and dust control of gravel roads (43.2%)
- Filling cracks and potholes (25.6%)

There were statistically significant differences in quality for nine of the highway services. Three of the differences showed a decrease in the percentage of respondents who had rated the services as good or excellent in the 2008 study. The greatest decrease was 17 percentage points for roadside brush and tree clearing. The greatest increases in the percentage of respondents who had rated the services as good or excellent were for the amount of four-lane divided highways, resurfacing sections of the highway, and number of passing lanes each of which showed an increase of 4 percentage points. The results are summarized in Table 13.

[1] Percentages show the percent of respondents that rated the service good or excellent in the 2009 survey.

Table 13: Percent of respondents rating the quality of various highway services as good or excellent (2008 – 2009)

	Good or Excellent 2008 (%)*	Good or Excellent 2009 (%)*	Change (percentage points)
The amount of four-lane divided highways	**45%**	**49%**	4%
Filling cracks and potholes	**23%**	**26%**	3%
Resurfacing sections of the highway	**45%**	**49%**	4%
Snow and ice removal during a storm	61%	63%	2%
Timeliness of the clean up after a storm	63%	65%	2%
Number of passing lanes	**52%**	**56%**	4%
The length of passing lanes	**71%**	**56%**	-15%
All pavement markings including yellow and white lines	**66%**	**69%**	3%
Roadside brush and tree clearing	**83%**	**66%**	-17%
The helpfulness of non-commercial highway signs	**83%**	**79%**	-4%
The amount of non-commercial highway signs	72%	72%	0%
The maintenance of non-commercial highway signs	79%	79%	0%
The width of highway shoulders	**49%**	**52%**	3%
The surface condition of highway shoulders	47%	49%	2%
Grading and dust control of gravel roads	45%	43%	-2%
Ditches and culverts	60%	59%	-1%
Bridges	64%	66%	2%

*Bolded percentages are statistically significantly different between 2008 and 2009.

Respondents rated highway service quality on a four-point scale ranging from poor to excellent .[2] Nine of the average quality ratings were significantly different in 2009 from 2008 ratings. The services with statistically significant increases in quality ratings for 2009 are listed below.

- The amount of four-lane divided highways
- Filling cracks and potholes
- Resurfacing sections of the highway
- The number of passing lanes
- The length of passing lanes
- The width of highway shoulders
- The surface condition of highway shoulders

The services with statistically significant decreases in average quality ratings since 2008 are listed below.

- The maintenance of non-commercial highway signs
- The helpfulness of non-commercial highway signs

Table 14 summarizes the average quality rating for each highway service.

[2] Quality scale: 1)Poor, 2) Only fair, 3) Good, 4) Excellent.

Table 14: A comparison of average ratings for the quality of highway services (2008 – 2009)

Quality rating Overall	2008*	2009*	Change
The amount of four-lane divided highways	**2.37**	**2.45**	**0.08**
Filling cracks and potholes	**1.91**	**1.95**	**0.04**
Resurfacing sections of the highway	**2.32**	**2.40**	**0.08**
Snow and ice removal during a storm	2.63	2.65	0.02
Timeliness of the clean up after a storm	2.66	2.69	0.03
Number of passing lanes	**2.49**	**2.54**	**0.05**
The length of passing lanes	**2.49**	**2.55**	**0.06**
All pavement markings including yellow and white lines	2.83	2.80	-0.03
Roadside brush and tree clearing	2.72	2.72	0.00
The helpfulness of non-commercial highway signs	**3.08**	**2.96**	**-0.12**
The amount of non-commercial highway signs	2.87	2.84	-0.03
The maintenance of non-commercial highway signs	**2.99**	**2.95**	**-0.04**
The width of highway shoulders	**2.41**	**2.46**	**0.05**
The surface condition of highway shoulders	**2.36**	**2.41**	**0.05**
Grading and dust control of gravel roads	2.33	2.30	-0.03
Ditches and culverts	2.57	2.54	-0.03
Bridges	2.68	2.68	0.00

*Scale: 1) Poor, 2) Only fair 3) Good, 4) Excellent, 5) Don't know/not applicable. Scale value 5 (don't know/not applicable) was not included in the analysis. Bolded averages are statistically significantly different between the two surveys

The Central district had the greatest number of statistically significant changes in quality ratings over the 2008 study. Ratings increased in the Central district for the following highway services:

- The amount of four-lane divided highways
- Resurfacing sections of the highway
- Number of passing lanes
- The length of passing lanes

- The width of highway shoulders
- The surface condition of highway shoulders

The following highway services had lower ratings for the Central region than in the previous study:

- Snow and ice removal during a storm
- Timeliness of clean up after a storm
- The helpfulness of non-commercial highway signs

Other differences between quality ratings for highway services in the Central district were not statistically significant.

The Eastern district showed statistically significant decreases in three highway service quality ratings over the 2008 study. These highway services were:

- Snow and ice removal during a storm
- The helpfulness of non-commercial highway signs
- Grading and dust control of gravel roads

Other differences between quality ratings for highway services in the Eastern district were not statistically significant.

The Northern district also showed some statistically significant differences between 2008 and 2009 highway service quality ratings. The ratings in 2009 were higher than in 2008 for:

- Snow and ice removal during a storm
- Timeliness of cleanup after a storm

The 2009 rating was lower in the Northern district than the 2008 rating for the helpfulness of non-commercial highway signs.

The Western district showed statistically significant improvements in quality ratings for the following highway services:

- Filling cracks and holes
- Resurfacing sections of the highway
- Snow and ice removal during a storm
- Timeliness of the clean-up after a storm
- Bridges

Only one highway service in the Western district showed statistically significant lower quality ratings than in the 2008 study and that service was the helpfulness of non-commercial highway signs.

While there may have been modest gains and losses in quality ratings since the 2008 study, the ratings in the 2009 study were not high quality ratings for highway services. All of the services had average

quality ratings of less than 3.0, indicating that they were rated less than good. Given a cut-off point of 2.7 out of 4.0 for the quality scale, a number of services did not meet this criterion.

In the Central district, the following services had quality ratings of less than 2.7:

- Filling cracks and potholes (2.01)
- Grading and dust control of gravel roads (2.39)
- Resurfacing sections of the highway (2.48)
- The surface condition of highway shoulders (2.50)
- The width of highway shoulders (2.56)
- The amount of four-lane divided highways (2.57)
- The length of passing lanes (2.59)
- Number of passing lanes (2.61)
- Ditches and culverts (2.62)
- Snow and ice removal during a storm (2.64)
- Timeliness of clean up after a storm (2.65).

The top three rated highway services in the Central district for quality included:

- The maintenance of non-commercial highway signs (2.99)
- The helpfulness of non-commercial highway signs (2.97)
- Roadside brush and tree clearing (2.85).

In the Eastern district, the following services had quality ratings of less than 2.7:

- Filling cracks and potholes (1.87)
- Grading and dust control of gravel roads (2.15)
- The surface condition of highway shoulders (2.28)
- The width of highway shoulders (2.30)
- The amount of four-lane divided highways (2.30)
- Resurfacing sections of the highway (2.31)
- Ditches and culverts (2.42)
- The length of passing lanes (2.46)
- Number of passing lanes (2.49)
- Bridges (2.56)
- Snow and ice removal during a storm (2.61)
- Roadside brush and tree clearing (2.62)
- Timeliness or clean up after a storm (2.69).

The top three rated highway services in the Eastern district for quality included:

- The helpfulness of non-commercial highway signs (2.93)

- The maintenance of non-commercial highway signs (2.86)
- The amount of non-commercial highway signs (2.77).

In the Northern district, the following services had quality ratings lower than 2.7:

- Filling cracks and potholes (1.92)
- Resurfacing sections of the highway (2.34)
- Grading and dust control of gravel roads (2.37)
- The surface condition of highway shoulders (2.40)
- The width of highway shoulders (2.49)
- Ditches and culverts (2.50)
- Bridges (2.54)
- The amount of four-lane divided highways (2.63)
- Roadside brush and tree clearing (2.65)
- The length of passing lanes (2.66).

The top three rated highway services in the Northern district for quality included:

- The helpfulness of non-commercial highway signs (2.95)
- All pavement markings including yellow and white lines (2.91)
- The maintenance of non-commercial highway signs (2.90).

In the Western district, the following services had quality ratings lower than 2.7:

- Filling cracks and potholes (1.93)
- Grading and dust control of gravel roads (2.22)
- The amount of four-lane divided highways (2.22)
- Number of passing lanes (2.33)
- The surface condition of highway shoulders (2.34)
- Resurfacing sections of the highway (2.36)
- The width of highway shoulders (2.37)
- The length of passing lanes (2.46)
- Ditches and culverts (2.53)
- Roadside brush and tree clearing (2.59)
- Snow and ice removal during a storm (2.66)
- Bridges (2.68).

The top three rated highway services in the Western district for quality included:

- The helpfulness of non-commercial highway signs (2.99)
- The maintenance of non-commercial highway signs (2.96)
- The amount of non-commercial highway signs (2.91).

The results are shown in Table 15.

Table 15: Average 2009 highway service quality ratings by district

	Central*	Eastern*	Northern*	Western*
The amount of four-lane divided highways	***2.57***	2.30	2.63	2.22
Filling cracks and potholes	2.01	1.87	1.92	***1.93***
Resurfacing sections of the highway	***2.48***	2.31	2.34	***2.36***
Snow and ice removal during a storm	**2.64**	**2.61**	***2.73***	***2.66***
Timeliness of the clean up after a storm	**2.65**	2.69	***2.75***	***2.72***
Number of passing lanes	***2.61***	2.49	2.71	2.33
The length of passing lanes	***2.59***	2.46	2.66	2.46
All pavement markings including yellow and white lines	2.80	2.70	2.91	2.82
Roadside brush and tree clearing	2.85	2.62	2.65	2.59
The helpfulness of non-commercial highway signs	**2.97**	**2.93**	**2.95**	**2.99**
The amount of non-commercial highway signs	2.82	2.77	2.84	2.91
The maintenance of non-commercial highway signs	2.99	2.86	2.90	2.96
The width of highway shoulders	***2.56***	2.30	2.49	2.37
The surface condition of highway shoulders	***2.50***	2.28	2.40	2.34
Grading and dust control of gravel roads	2.39	**2.15**	2.37	2.22
Ditches and culverts	2.62	2.42	2.50	2.53
Bridges	2.78	2.56	2.54	***2.68***

Scale: 1) Poor, 2) Only fair, 3) Good, 4) Excellent. Scale value 5 (don't know/not applicable) was not included in the analysis.
Bolded means are statistically significantly lower, and bold italicized means significantly higher, than in the 2008 survey.

5.3 Gap Analysis

A gap analysis was performed to determine where there were the greatest differences between respondents' service expectations, and their service quality evaluations. To conduct the analysis, the numbers of respondents who rated a service as "Very important", and those who did not, were tabulated with those who rated the quality of the service as "Excellent," and those who did not. The goal of the gap analysis is to determine how many rated the service as "Very important," but did not rate the quality as "Excellent." The larger the gap score, the greater the deficit between the public's expectations for performance, and actual service performance. This percentage shows which of the services the Nova Scotia Department of Transportation and Infrastructure Renewal can focus on to improve the highway system in Nova Scotia. It also assists in the prioritization of services for attention.

The gap analysis revealed that 11 out of 17 gap scores had statistically significant decreases since the 2008 survey. Overall, the 2009 gap scores ranged from 40% to 86%. The services with the top five gap scores for 2009 included:

- Filling cracks and potholes (86%)
- Snow and ice removal during a storm (71%)
- Bridges (71%)
- All pavement markings included yellow and white lines (65%)
- The amount of four-lane divided highways (62%).

The measures with the lowest gap scores were:

- The amount of non-commercial highway signs (46%)
- Ditches and culverts (45%)
- The length of passing lanes (43%)
- Roadside brush and tree clearing (43%)
- Number of passing lanes (40%).

The results are summarized in Table 16. The gaps are shown for years 2002 through 2009. The 2009 gaps are compared to 2008 gaps for purposes of significance testing.

Table 16: Gap analysis (2002 – 2009)

	2002	2003	2004	2005	2006	2007	2008*	2009*
The amount of four-lane divided highways	64%	61%	56%	59%	54%	70%	**65%**	**62%**
Filling cracks and potholes	88%	85%	86%	86%	82%	91%	87%	86%
Resurfacing sections of the highway	78%	68%	71%	69%	70%	81%	**71%**	**62%**
Snow and ice removal during a storm	82%	75%	78%	73%	70%	80%	71%	71%
Timeliness of the clean up after a storm	-	-	75%	71%	71%	75%	**68%**	**61%**
Number of passing lanes	63%	55%	57%	47%	42%	54%	**45%**	**40%**
The length of passing lanes	67%	58%	57%	51%	45%	62%	**49%**	**43%**
All pavement markings including yellow and white lines	79%	74%	68%	73%	69%	81%	64%	65%
Roadside brush and tree clearing	55%	51%	48%	51%	52%	61%	**47%**	**43%**
The helpfulness of non-commercial highway signs	71%	66%	60%	42%	50%	73%	53%	54%
The amount of non-commercial highway signs	66%	56%	57%	52%	47%	64%	**49%**	**46%**
The maintenance of non-commercial highway signs	70%	59%	60%	54%	50%	69%	51%	49%
The width of highway shoulders	71%	65%	67%	59%	62%	75%	**64%**	**58%**
The surface condition of highway shoulders	72%	67%	68%	63%	64%	77%	**66%**	**62%**
Grading and dust control of gravel roads	53%	45%	45%	41%	38%	66%	**56%**	**50%**
Ditches and culverts	62%	51%	50%	48%	43%	65%	**50%**	**45%**
Bridges	74%	72%	59%	64%	54%	84%	72%	71%

*Bolded gaps are statistically significantly different between the two surveys.

A review of the district gap scores revealed that the Central district had the lowest number of gap scores over 50%, indicating that those in the Central district had fewer gaps than those in other districts. These results are consistent with the 2008 survey. The 2009 survey revealed seven gap scores in the Central

district greater than or equal to 50%, compared to 14 in the Eastern district, 10 in the Northern district and 12 in the Western district. The results of the district gap analysis are shown in Table 17.[3]

The Central district had the lowest gap scores for all but three highway services. These gap scores included:

- Amount of four-lane divided highways (62.0%)
- Length of passing lanes (48.4%)
- The helpfulness of non-commercial highway signs (48.1%)

The Central district had the highest gap score for only one service: the length of passing lanes (48.4%). (tied with Eastern District)

The five highest gap scores for the Central district included:

- Filling cracks and holes (83.6%)
- Snow and ice removal during a storm (68.5%)
- Bridges (63.8%)
- Amount of four-lane divided highways (62.0%)
- All pavement markings (58.8%).

The five lowest gap scores for the Central district included:

- Amount of non-commercial highway signs (42.8%)
- Grading and dust control of gravel roads (36.6%)
- Number of passing lanes (31.5%)
- Roadside brush and tree clearing (30.4%)
- Ditches and culverts (30.3%).

The Eastern district had the highest gap scores for all but three highway services. These services were:

- Filling cracks and holes (86.7%)
- Bridges (72.9%)
- Number of passing lanes (45.8%).

The five highest gap scores for the Eastern district included:

- Filling cracks and potholes (86.7%)
- Snow and ice removal during a storm (75.3%)
- Bridges (72.9%)
- All pavement markings including yellow and white lines (71.5%)
- Surface condition of highway shoulders (67.9%).

[3] To be consistent with the 2007 and 2008 surveys the district gap analysis was conducted using data unweighted by district population.

The five lowest gap scores for the Eastern district included:

- Amount of non-commercial highway signs (52.1%)
- Ditches and culverts (50.8%)
- Roadside brush and tree clearing (48.6%)
- Length of passing lanes (48.4%)
- Number of passing lanes (45.8%).

Northern District had the highest gap score for bridges (73.2%), tied with Western District.

The Northern district had the lowest gap scores the following highway services:

- Helpfulness of non-commercial highway signs (44.1%)
- Length of passing lanes (40.8%).

The five highest gap scores for the Northern district included:

- Filling cracks and potholes (86.1%)
- Bridges (73.2%)
- Snow and ice removal during a storm (69.8%)
- Resurfacing sections of the highway (64.5%)
- Surface condition of highway shoulders (63.1%).

The five lowest gap scores for the Northern district included:

- The amount of non-commercial highway signs (45.2%)
- Helpfulness of non-commercial highway signs (44.1%)
- Roadside brush and tree clearing (44.1%)
- Length of passing lanes (40.8%)
- Number of passing lanes (34.3%).

The Western district had the lowest gap score for only one highway service: amount of four-lane divided highways (59.7%).

The Western district had the highest gap scores for three highway services:

- Filling cracks and holes (88.6%)
- Bridges (73.2% tied with the Northern district)
- Number of passing lanes (48.3%).

Despite apparent differences in the overall level of satisfaction with highway services as reflected by gap scores across districts, there appears to be consistent results for various services. Some, such as filling cracks and potholes, bridges, and snow and ice removal during a storm appear to have the biggest gaps across districts, while others, such as length and number of passing lanes, ditches and culverts, and

roadside brush and tree clearing tend to have lower gap scores across districts. The gap scores across districts are shown in Table 17.

Table 17: District gap analysis

	Central*	Eastern*	Northern*	Western*
Amount of four-lane divided highways	62.0%	**66.9%**	60.4%	*59.7%*
Filling cracks and potholes	*83.6%*	86.7%	86.1%	**88.6%**
Resurfacing sections of the highway	*52.4%*	**67.8%**	64.5%	63.7%
Snow and ice removal during a storm	*68.5%*	**75.3%**	69.8%	70.9%
Timeliness of a cleanup after a storm	*57.0%*	**64.8%**	60.0%	61.8%
Number of passing lanes	*31.5%*	45.8%	34.3%	**48.3%**
Length of passing lanes	**48.4%**	**48.4%**	*40.8%*	46.5%
All pavement markings including yellow and white lines	*58.8%*	**71.5%**	62.7%	66.0%
Roadside brush and tree clearing	*30.4%*	**48.6%**	44.1%	47.0%
Helpfulness of non-commercial highway signs such as speed limit signs, road exit signs and so	48.1%	**58.9%**	*44.1%*	52.9%
Amount of non-commercial highway signs such as speed limit signs, road exit signs and so forth	*42.8%*	**52.1%**	45.2%	44.1%
Maintenance of non-commercial signs such as speed limit signs, road exit signs and so forth	*45.3%*	**55.0%**	48.0%	48.6%
Width of highway shoulders	*47.2%*	**66.3%**	54.8%	59.3%
Surface condition of highway shoulders	*49.5%*	**67.9%**	63.1%	67.5%
Grading and dust control of gravel roads	*36.6%*	**57.5%**	50.6%	51.5%
Ditches and culverts	*30.3%*	**50.8%**	49.2%	50.0%
Bridges	*63.8%*	72.9%	**73.2%**	**73.2%**

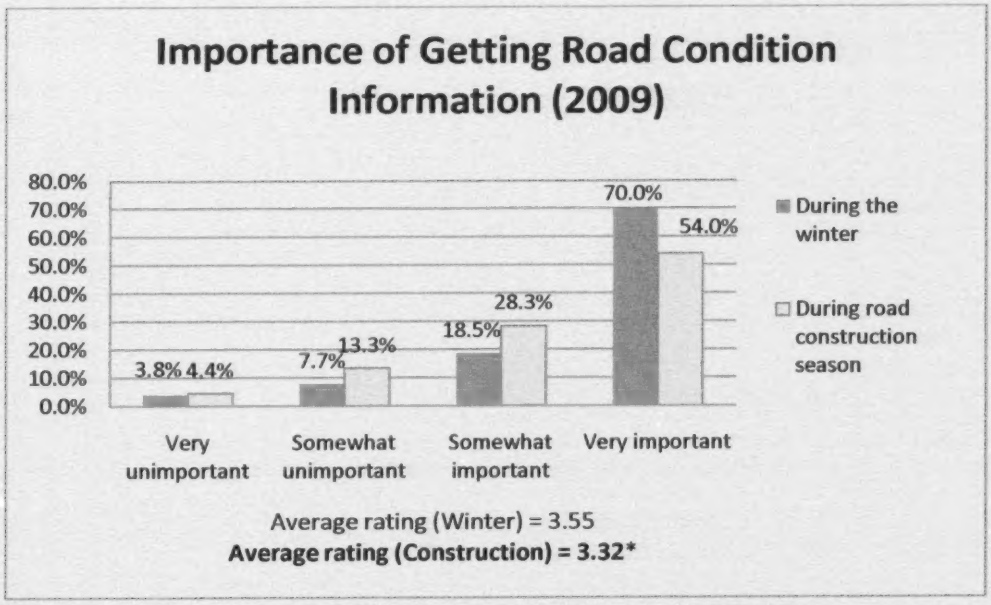
*Note: Bolded items are highest gap measures for each service. Italicized items are lowest gap measures for each service.

6. Highway Conditions Information

Respondents were asked how important it was for them to receive highway information during the winter, and during road construction season. Nearly 9 out of 10 respondents felt that it was somewhat or very important to obtain road condition information during the winter months. Over 8 in 10 respondents also felt it was important to get road condition information during construction season.

On a four-point importance scale, ranging from very unimportant to very important[4], the importance of obtaining road condition information averaged 3.55 for the winter months and 3.32 for construction season. Obtaining road condition information during construction season had dropped in level of importance since the 2008 study. The results are shown in Figure 5.

Figure 5: Importance of getting information about road conditions during the winter and during road construction season



*Bolded rating is statistically significantly lower rating in 2008 survey.

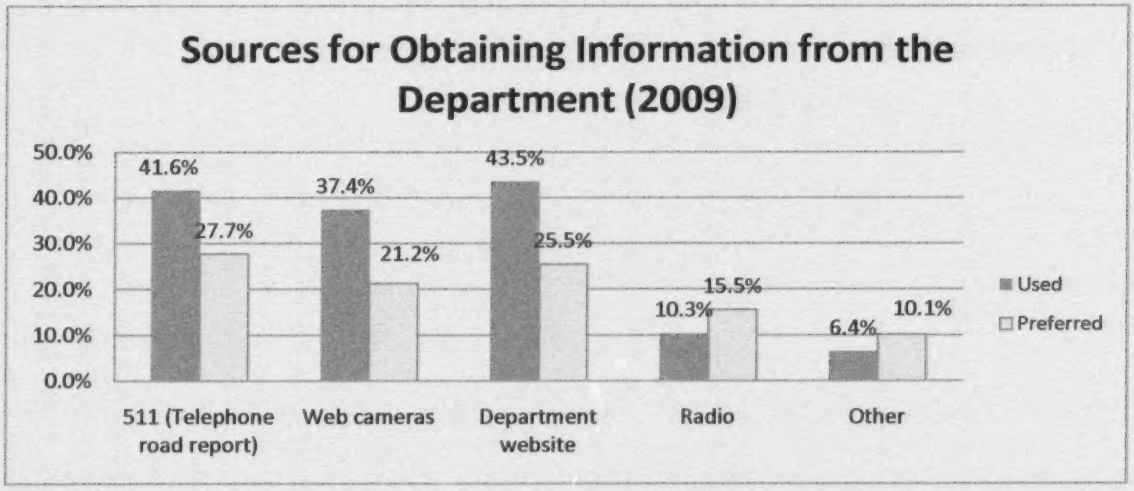
There were no statistically significant differences between overall importance measures for obtaining road condition information during the winter months compared to the 2008 survey. However, those living in the Northern and Western districts had statistically significantly lower importance ratings for obtaining road information during construction season in 2009 compared to 2008.

Respondents were asked if they had ever obtained information about road conditions from the Nova Scotia Department of Transportation and Infrastructure Renewal. A total of 51.6% percent had received

[4] Importance scale: 1) Very unimportant, 2) Somewhat unimportant, 3) Somewhat important, 4) Very important.

information from the department and 48.4% had not. Respondents were then asked what information sources they had used to obtain information and what information sources they preferred to use to get information. The top information sources used from the department were the department website (43.5%) and 511 road information by telephone (41.6%). Web cameras were also popular information sources with 37.4% of responses. These are also the top sources preferred by respondents. The various sources of department information used are summarized in Figure 6.

Figure 6: Sources of information used and preferred from the Nova Scotia Department of Transportation and Infrastructure Renewal



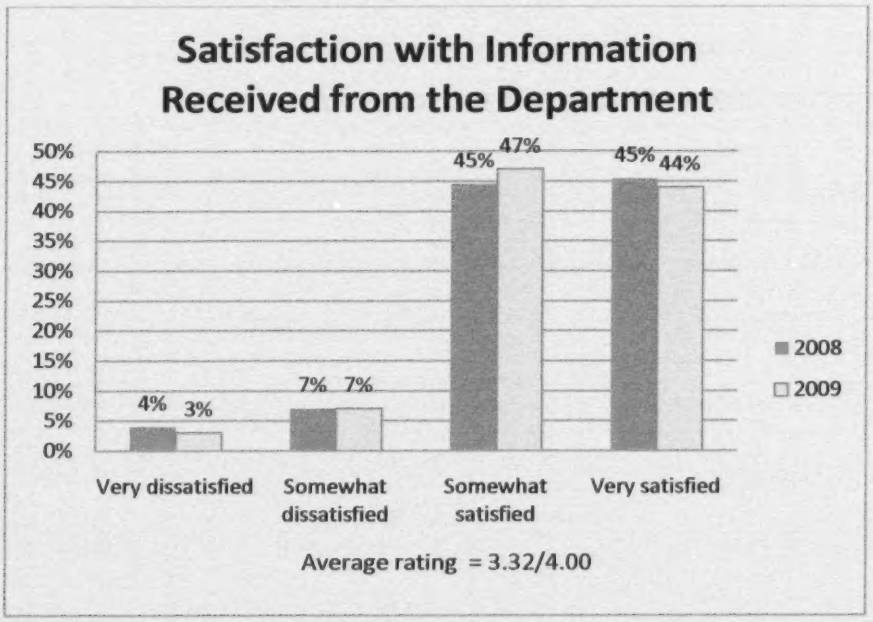
Only 54 individuals listed other contact methods to obtain information from the department. Other information sources used included:

- Television/Weather Channel/News
- Family/friend
- The Internet (no specific website identified)
- 1-800 numbers

Approximately 10% of respondents indicated that they also preferred to get their information from television, the Weather Channel, or news broadcasts.

Most were satisfied with the information that they received from the department. The satisfaction rating averaged 3.32 out of 4.00, based on a 4-point scale ranging from 1) Very dissatisfied, to 4) Very satisfied. There were no statistically significant differences in ratings from the 2008 survey. The results are shown in Figure 7. A total of 91% of respondents were either somewhat satisfied or very satisfied with the road information that they received.

Figure 7: Satisfaction with road conditions information obtained from the Nova Scotia Department of Transportation and Infrastructure Renewal



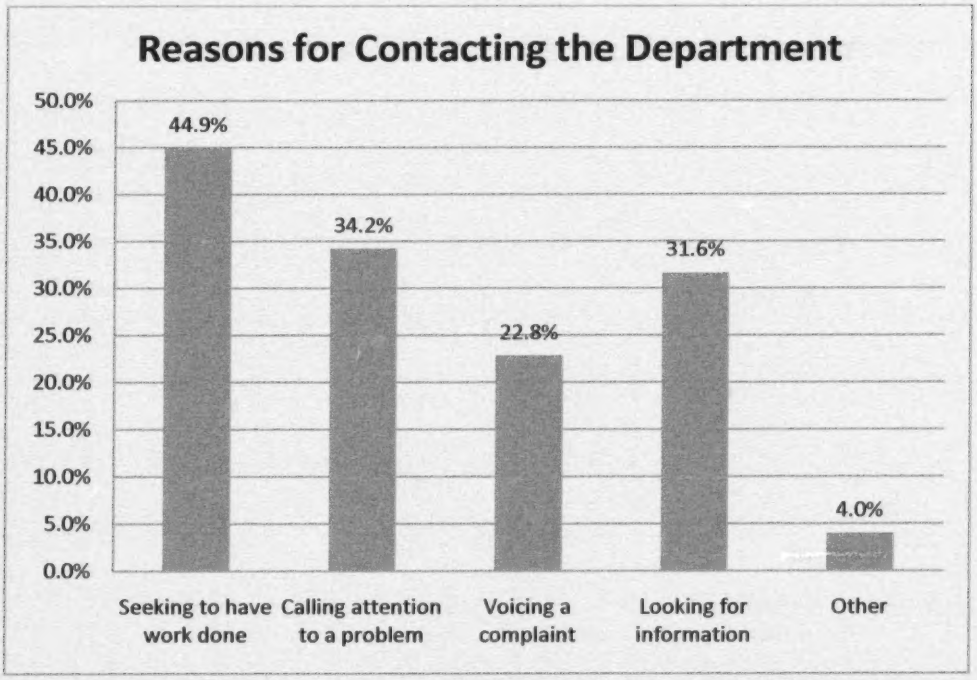
Some respondents were not satisfied with the information they received. The key reasons for dissatisfaction included insufficient, inaccurate or poor information provided regarding road conditions and that the information was out of date.

7. Communication with Department Staff

A total of 23.1% percent of respondents had contacted the department in the past year. The reasons for making contact are shown in Figure 8. The results reveal that the highest percent were seeking to have work done in their area. Also, 6.2% percent indicated that if they knew it was available, they would request information in French.

Of those who had contacted the department, 44.9% were seeking to have work done, 34.2% were calling attention to a problem, and 31.6% were looking for information. Nearly 23% were calling to voice a complaint. The results are shown in Figure 8.

Figure 8: Reasons for contacting the department in the last year



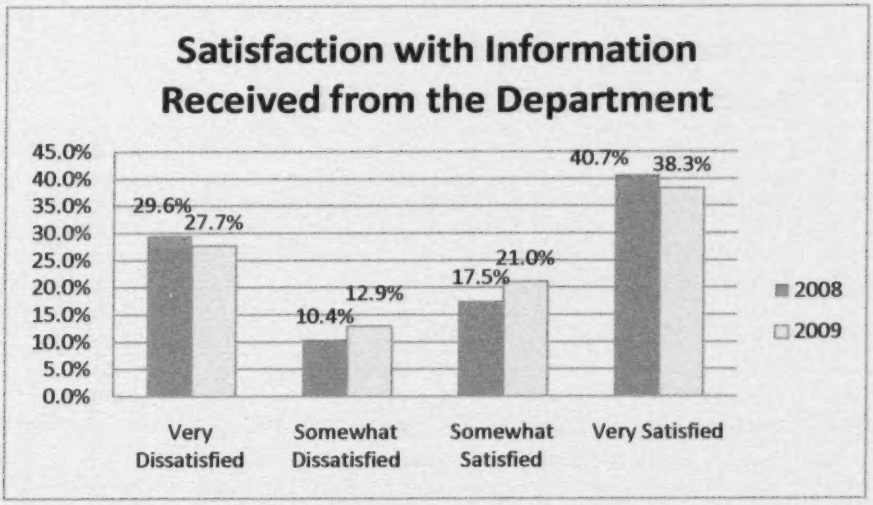
*The sample size for those who contacted the department in the last year is 480 individuals.

The respondents were asked if they were satisfied with the responses that they received from the Department of Transportation and Infrastructure Renewal. The average rating was 3.32 on a 4-point scale, ranging from 1) Very dissatisfied to 4) Very satisfied. There were no statistically significant differences between the 2008 and 2009 average ratings. The results are shown in Figure 9.

Comparison of average ratings for district satisfaction levels showed that respondents in the Western district rated their satisfaction levels higher than they did in the 2008 survey. There were no statistically significant differences for Central, Eastern, or Northern districts.

Nearly 200 individuals gave reasons for their dissatisfaction with the response they received. The most frequent reasons given for being dissatisfied were that the work was not done, or that the work that was done did not solve the problem. The reasons given are shown in Table 18.

Figure 9: Satisfaction with department's response



*The sample size is equal to those who contacted the department in the last year, and who also evaluated the service they received, totalling 472 individuals, or 21%. Difference in average rating is not statistically significant from 2008 rating.

Table 18: Reasons for being dissatisfied with department contact

Reasons	Percent (n=185)
Work not done	51%
Department did not solve problem/work poor	21%
Bad snow removal	12%
Poor cleanup after construction	1%
Not enough staff to do work	2%
Response/work too slow	19%
Department not responsible for damage	9%
No answer at Department	8%
Other	31%

8. Advertising Awareness

8.1 Ads to Increase Awareness of Crosswalk Safety

Respondents were asked if they recalled hearing or seeing any ads designed to increase the awareness of crosswalk safety. The ads were run by the Nova Scotia government and the Halifax Regional Municipality during the fall of 2009.

Forty percent of respondents recalled hearing or seeing the crosswalk safety ads. Respondents were then asked what they recalled most about the ads. Recollections ranged from the main idea in the ad, to slogans or key messages, as well as the location where respondents thought they had seen the ad. The largest single response was for television, where 37.4% of respondents believed they had viewed the ad. This was followed by certain messages, including the need for drivers and pedestrians to be alert, make eye contact, and obey the signs. There was no attempt made to verify whether or not the information recalled from the ads was accurate. A list of responses in shown in Table 19.

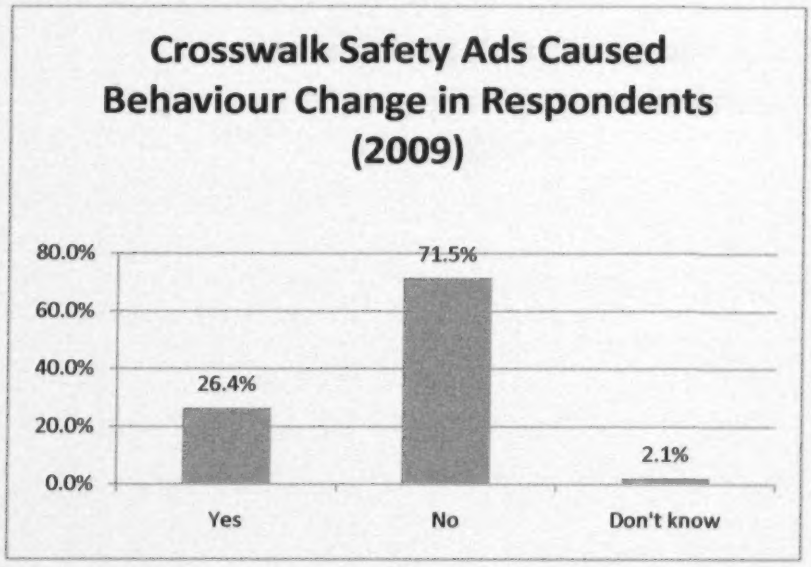
Table 19: What respondents remembered most about crosswalk safety ads

Respondents Recalled:	Percent*
Saw the ad on television	37.4%
Drivers and pedestrians should look out for each other, stay alert, make eye contact	16.8%
Drivers must yield to pedestrians whether crosswalk is marked or not	15.0%
Pedestrians must obey traffic signals and should wait until vehicles have stopped before entering the crosswalk	14.9%
Recall nothing in particular	12.2%
Slogan/key message	11.3%
Think about who is in the crosswalk (father, mother, sister, etc.)	4.9%
Saw them in the newspaper	8.5%
Heard them on the radio	4.4%
Saw them on the back of a bus	0.9%
Saw them on transit shelters	0.3%
Other	14.6%

*Some respondents chose more than one recollection about the ads. Multiple response items. Does not sum to 100%. Overall sample = 833.

Respondents were asked whether or not exposure to the ads had changed their behaviour. Over one-quarter, 26.4% of respondents who recalled the ads, indicated that the ads had caused them to change their behaviour. The results are shown in Figure 10. There was no attempt made to verify that a behaviour change had actually occurred, or that such behaviour changes were actually due to ad exposure.

Figure 10: Impact of crosswalk safety ads on behaviour



8.2 Ads for Winter Road Maintenance

Respondents were asked if they recalled hearing ads for winter road maintenance practices. The majority did not recall the ads; however, 35.6% did remember them. Respondents were asked where they saw or heard the road maintenance ads. Most believed that the ads were played on the television. No attempt was made to verify the accuracy of respondents' recall. The results are summarized in Table 20.

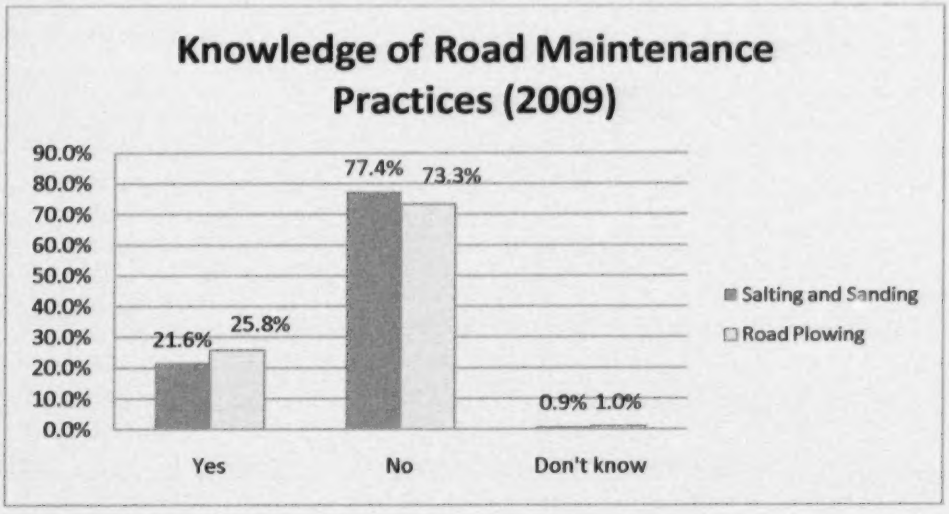
Table 20: Respondents' recall of road maintenance ads

Respondents' Recollections of Road Maintenance Ad Source*	Overall	Central	Eastern	Northern	Western
Television	86.4%	87.1%	82.9%	82.2%	89.8%
Print (newspaper)	11.5%	10.0%	15.9%	14.4%	10.2%
Radio	10.6%	11.0%	11.6%	13.7%	7.3%
Other (see Anecdotal Responses in Appendix)	2.3%	2.4%	1.6%	2.4%	3.8%
Government website	0.1%	0.0%	0.6%	0.0%	0.0%

*Table shows percent of those who recalled seeing/hearing the ads. Sample sizes: Overall = 739, Central = 378, Eastern = 123, Northern = 82, Western = 177. Some respondents chose more than one recollection about the ads. Multiple response item. Does not sum to 100%.

Respondents were asked if they were aware of the approach used by government to determine when different roads get plowed. The majority of respondents (73.3%) indicated that they did not know. Respondents were also asked if they were aware of the approach used by government regarding when sanding and salting occur. The majority of the respondents (77.4%) indicated that they did not. These results are summarized in Figure 11.

Figure 11: Respondents' knowledge of winter road maintenance practices



9. Sustainable Transportation

Respondents were asked what method of transportation was their main mode of getting to school or work outside the home. They were also asked how far they travelled one way, between their work or their school, as applicable. A total of 41.1%[5] of respondents reported not traveling to school or working outside of the home. Of those who did so, the majority drove an automobile. In most cases, the automobile was driven when there were no public transportation options (59.3%). In addition, 26.0% drove an automobile when there were other public transportation options available. Also, 4.9% of respondents walked to their destinations, and 6.7% took public transit. The results are shown in Table 21.

The distance to work or school ranged from four kilometres or less one way, to 25 kilometres or more. Many respondents travelled 25 kilometres or more, one way, to their destination. The complete distribution of travel distances is shown in Table 22.

Table 21: Main mode of transportation to work or school

Main Mode of Transportation to Work or School	Percent
Automobile - no public transit available	59.3%
Automobile - public transit available	26.0%
Public transit	6.7%
Cycling	0.8%
Walking	4.9%
Multiple modes	0.7%
Other	1.7%
Total*	100.0%

*Excludes respondents (41.1%) who did not attend school or work outside the home.
Unweighted sample = 1,228.

[5] The reported percentage of individuals who did not travel to work or school was 40.9% for mode of transportation used, and 41.1% for the distance in kilometres between work and school. This difference is due to data weighting and rounding. The actual unweighted number of cases for individuals who do not travel to work or school was 801 (38.6%).

Table 22: Distance to school or work

Approximate One-Way Distance to School or Work	Percent
1 to 4 kilometres	20.9%
5 to 9 kilometres	16.8%
10 to 14 kilometres	14.8%
15 to 19 kilometres	8.8%
20 to 24 kilometres	8.0%
25 kilometres or more	30.6%
Total*	100.0%

* Excludes respondents (41.1%) who did not attend school or work outside the home. Unweighted sample = 1,222.

10. Priorities for Various Highway Features and Funding

Respondents were asked to indicate what they thought should be the number one priority for the Department of Transportation and Infrastructure Renewal. A variety of priorities were listed. The top listings are shown in Table 23.

The 2009 respondents indicated a preference for both better road maintenance, and twinned highways. This was relatively unchanged from the 2008 survey results. Based on this comparison it appears that the key themes are consistent for priorities across the two years.

Table 23: Priorities listed by respondents

Priorities	Percentage (n=2,069)
Better road maintenance (potholes)	39.0%
Four-lane divided highways	21.0%
Pave/do not patch road	8.0%
Back/gravel/secondary roads	4.3%
Wider roads	1.0%
Better snow clearing	5.2%
Bridges	1.2%
101 highway	0.8%
Cape Breton Island	0.7%
Other	18.7%

Respondents were asked which sources of funding should be used for highway and road improvements. Most felt that gas taxes should fund road improvements, followed by fees collected through the Registry of Motor Vehicles and general tax revenues. The breakout of responses is shown in Figure 12.

Figure 12: Sources of funding for highway and road improvements